



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/760,209

01/21/2004

Kia Silverbrook

MPA17US

1357

24011

7590

05/25/2006

SILVERBROOK RESEARCH PTY LTD
393 DARLING STREET
BALMAIN, NSW 2041
AUSTRALIA

EXAMINER

UHLENHAK, JASON S

ART UNIT

PAPER NUMBER

2853

DATE MAILED: 05/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/760,209

Applicant(s)

SILVERBROOK ET AL.

Examiner

Jason Uhlenhake

Art Unit

2853

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 – 3, 6 are rejected under 35 U.S.C. 103(a) as being obvious over Silverbrook (U.S. Pat. 7,021,843) in view of Silverbrook (U.S. Pat. 6,916,082)

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and

Art Unit: 2853

reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(I)(1) and § 706.02(I)(2).

Silverbrook ('843) discloses:

- ***regarding claim 1***, at least one printhead module comprising at least two separate printhead integrated circuits, each of the printhead integrated circuits having nozzles formed therein for delivering printing fluid onto the surface of print media, an elongate support member supporting the at least two printhead integrated circuits (Column 12, Lines 51 – 65; Column 13, Lines 52 – 67; Column 11, Lines 4 - 5); and an electrical connector for connecting electrical signals to the at least two printhead integrated circuits (Column 2, Lines 60 - 67; Column 12, Lines 50 - 65)
- ***regarding claim 2***, wherein the at least one printhead module comprises one or more groups of two printhead integrated circuits and a single controller is selected for controlling each group of two printhead integrated circuits via the electrical connector (Figures 12 – 13; Column 13, Lines 58 - 67)
- ***regarding claim 3***, wherein the at least one printhead module comprises one or more groups of four printhead integrated circuits and a single controller is selected for controlling each group of four printhead integrated circuits via the electrical connector (Figures 12 – 13; Column 13, Lines 58 - 67)

- **regarding claim 6**, at least on printhead module formed as a unitary arrangement of at least two printhead integrated circuits (Column 13, Lines 58 - 67)

Silverbrook ('843) does not disclose expressly the following:

- **regarding claim 1**, drive electronics incorporating at least one controller arranged to control the printing operation of a selectable number of the at least two printhead integrated circuits via the electrical connector; casing in which the at least one printhead module and the drive electronics are removably mounted, the at least one printhead module being removably mounted to the casing at the elongate support member

- **regarding claim 6**, support member, at least one fluid distribution member mounting the at least two printhead integrated circuits to the support member and an electrical connector

- the support member has at least one longitudinally extending channel for carrying the printing fluid for the printhead integrated circuits, plurality of apertures extending through a wall of the support member arranged so as to direct the printing fluid from the at least one channel to associated nozzles in both , or if more than two, all of the printhead integrated circuits by way of respective ones of the fluid distribution members

Silverbrook et al ('082) discloses:

- **regarding claim 1**, drive electronics incorporating at least one controller arranged to control the printing operation of a selectable number of the at least two printhead integrated circuits via the electrical connector (Column 5, Lines 7 - 18); casing

Art Unit: 2853

in which the at least one printhead module and the drive electronics are removably mounted (Column 6, Lines 36 – 40) the at least one printhead module being removably mounted to the casing at the elongate support member, for the purpose of replacing any defective modules, and the purpose of controlling the printhead modules.

- **regarding claim 6**, support member, at least one fluid distribution member mounting the at least two printhead integrated circuits to the support member (Column 2, Lines 55 – 62; Column 3, Lines 1 – 15), and an electrical connector (Column 2, Lines 35 – 38), for the purpose of providing support for an ink supply device for supplying ink to a printhead chip.

- the support member has at least one longitudinally extending channel (62 of Figure 1) for carrying the printing fluid for the printhead integrated circuits (Column 3, Lines 1 – 15), plurality of apertures extending through a wall of the support member arranged so as to direct the printing fluid from the at least one channel to associated nozzles in both , or if more than two, all of the printhead integrated circuits by way of respective ones of the fluid distribution members (Column 2, Lines 40 – 43; Column 3, Lines 1 – 15), for the purpose of providing support for an ink supply device for supplying ink to a printhead chip.

At the time the invention was made it would have been obvious to a person of ordinary skill in the art to incorporate the teaching of drive electronics incorporating at least one controller arranged to control the printing operation of a selectable number of the at least two printhead integrated circuits via the electrical connector; casing in which the at least one printhead module and the drive electronics are removably mounted, the

at least one printhead module being removably mounted to the casing at the elongate support member; support member, at least one fluid distribution member mounting the at least two printhead integrated circuits to the support member and an electrical connector; the support member has at least one longitudinally extending channel for carrying the printing fluid for the printhead integrated circuits, plurality of apertures extending through a wall of the support member arranged so as to direct the printing fluid from the at least one channel to associated nozzles in both , or if more than two, all of the printhead integrated circuits by way of respective ones of the fluid distribution members as taught by Silverbrook ('082) into the device of Silverbrook ('843). The motivation for doing so would have been to provide an ink supply device for supplying ink to a printhead chip, the purpose of replacing any defective modules, and the purpose of controlling the printhead modules.

Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Silverbrook (U.S. Pat. 7,021,843) in view of Silverbrook (U.S. Pat. 6,916,082).

Silverbrook ('843) in view of Silverbrook ('082) discloses the claimed invention except for the following:

- ***regarding claim 4***, wherein the at least one printhead module comprises one or more groups of eight printhead integrated circuits and a single controller is selected for controlling each group of eight printhead integrated circuits via the electrical connector. It would have been obvious to one having ordinary skill in the art at the time the invention was made to implement the at least one printhead module comprises one or more groups of eight printhead integrated circuits and a single controller is selected

for controlling each group of sixteen printhead integrated circuits via the electrical connector, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art, for the purpose of improving the quality of printing. *St. Regis Paper Co. v. Bemis Co.*, 93 USPQ 8.

- **regarding claim 5**, the at least one printhead module comprises one or more groups of sixteen printhead integrated circuits and a single controller is selected for controlling each group of sixteen printhead integrated circuits via the electrical connector. It would have been obvious to one having ordinary skill in the art at the time the invention was made to implement the at least one printhead module comprises one or more groups of sixteen printhead integrated circuits and a single controller is selected for controlling each group of sixteen printhead integrated circuits via the electrical connector, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art, for the purpose of improving the quality of printing. *St. Regis Paper Co. v. Bemis Co.*, 93 USPQ 8.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to incorporate the teaching of the at least one printhead module comprises one or more groups of eight and sixteen printhead integrated circuits and a single controller is selected for controlling each group of eight and sixteen printhead integrated circuits via the electrical connector as taught by Silverbrook ('843) in view of Silverbrook ('082). The motivation for doing so would have been to improve the quality of printing.

Response to Arguments

Applicant's arguments with respect to claims 1 - 6 have been considered but are moot in view of the new ground(s) of rejection. Please see the rejections regarding Silverbrook ('843), in view of Silverbrook ('082). They disclose at least one printhead module comprising at least two separate printhead integrated circuits, each of the printhead integrated circuits having nozzles formed therein for delivering printing fluid

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

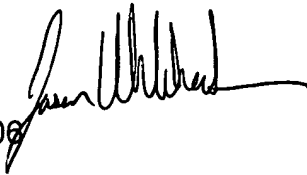
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Uhlenhake whose telephone number is (571) 272-5916. The examiner can normally be reached on Monday - Friday 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JSU
May 15, 2006



 5/04
K. FIGGINS
PRIMARY EXAMINER